PART ONE - CONFIGURATION MANAGEMENT (CM) POLICY ELEMENTS

SECTION I: General Configuration Management Policy

I-1 National policy for configuration management in the FAA consists of a multi-layered structure - policy, process, and procedures, with each layer providing an increasing level of detail. This structure provides high-level configuration management requirements, and the detail for how these requirements are to be met. Policy, process, and procedures shall be followed unless specifically designated as optional or discretionary.

I-2 Configuration management shall apply to all systems, subsystems, and components of the National Airspace System, including the documentation describing the NAS. Configuration management control begins with baselining of requirements documentation and ends with decommissioning of equipment in the operational NAS.

I-3 The configuration management discipline shall be applied to hardware, including power systems, software, firmware, documentation, test and support equipment, facility space, spares, training and courseware, and manuals. A Configuration Control Board (CCB) shall ensure that documentation associated with an approved change to a NAS system is updated to reflect the appropriate baseline. Affected documentation may include training material, courseware, and other National Airspace Integrated Logistics Support documentation.

I-4 The activities that constitute the configuration management discipline are planning and management, configuration identification, change management, status accounting, and configuration verification and audit. Integrated Product Teams, regions, and other solution providers shall evaluate, select, and tailor specific configuration management activities and develop the processes necessary to perform configuration management in their specific product environment. All IPT's, regions, and other solution providers, including the NAS CCB, shall perform the planning, identification, change control, status accounting, and audit activities.

I-4.1
Configuration Management Planning and Management

This activity includes planning, coordinating, and managing all tasks necessary to implement configuration management principles and to conduct configuration management activities. Configuration management planning and management occurs throughout all life-cycle phases. Documentation of the planning process and development of the Configuration Management Plan formalizes involvement and ensures continuity of configuration management practices at all levels of management.

I-4.2
Configuration Identification

IPT's, regions, and other solution providers shall identify configuration items and shall develop appropriate configuration documentation to define each configuration item. This activity

includes the development of a product top-down structure that summarizes the total units and configuration documentation for the system or configuration item, and the assignment of unique identifiers, which identify units, and groups of units, in a product. Configuration identification and product information shall be maintained and readily available to all FAA decisionmakers. Baselined documentation shall be provided to the appropriate program, IPT, or national program support library, and shall be maintained with all necessary links to the CM Information Management System. To ensure configuration management information is available to all decisionmakers and CM practitioners in the FAA community, the central configuration management authority shall be responsible for providing the necessary facilities and electronic tools to document, monitor, and CM information in the NAS.

I-4.3
Configuration Change Management

IPT's, regions, and other solution providers shall implement a systematic and measurable change process that is consistent with national configuration management policy, and shall document it in their approved CCB Charter and Operating Procedures. The implemented change process shall ensure proposed changes are properly identified, prioritized, documented, coordinated, evaluated, and adjudicated. Approved changes shall be properly documented, implemented, verified, and tracked to ensure incorporation in all systems and spares. The NAS CCB shall approve all CCB Charters. The IPT, region, or solution provider CCB shall approve Operating Procedures.

I-4.4
Configuration Status Accounting

IPT's, regions, and other solution providers shall develop and maintain configuration information for their configuration items or products in a systematic and disciplined manner in accordance with this policy and National Configuration Management Process and Procedures. Status accounting information includes developing and maintaining site configuration data and the incorporation of modification data on systems and configuration items. This configuration information must be available for use by decisionmakers over the life cycle of the product.

I-4.5
Configuration Verification and Audit

IPT's, regions, and other solution providers shall verify that a product's requirements have been met and the product design meeting those requirements has been accurately documented before a product configuration is baselined. Verification takes the form of a functional configuration audit and a physical configuration audit. The functional configuration audit provides a systematic comparison of requirements with the results of tests, analyses, or inspections. The physical configuration audit determines whether the product is consistent with its design documentation. In addition, operational systems must be periodically validated to ensure consistency between a product and its current baseline documentation. Verification of the incorporation of modifications is a critical function of this activity. This validation includes verification of facility baselines and conduct of system audits after commissioning.

I-5
Configuration Control Boards

A Configuration Control Board with an approved Charter and Operating Procedures shall be the official agencywide forum used to establish configuration management baselines and to approve/disapprove subsequent changes to those baselines. Proposed changes to configuration management baselines must be submitted to the appropriate Configuration Control Board on the agency-approved case file - NAS Change Proposal (NCP) form. A Configuration Control Board shall document its approval/disapproval decision on the agency-approved Configuration Control Decision (CCD) form.

I-6
CCB Charters and Operating Procedures

CCB Charters and Operating Procedures shall be maintained to reflect the addition of new programs, the additions/deletions of configuration items, and changes to CCB membership. The central configuration management authority shall assist IPT's, regions, and other solution providers with the development of Charters and Operating Procedures. All CCB Charters shall be coordinated with the configuration management authority and shall be approved by the NAS CCB.

I-7
Commercial Off-The-Shelf, Non-Developmental Items, and Commercially Available Software

After FAA acceptance, Commercial Off-The-Shelf (COTS), Non-Developmental Items (NDI), and Commercially Available Software (CAS) systems shall be maintained under configuration control. This control shall entail the management of a performance specification, and a data package, if available. Control will require the establishment and maintenance of records indicating the version of COTS/NDI/CAS at specific locations. When identifying COTS as a proposed solution, IPT's and other solution providers shall analyze and consider the impacts of vendor modification of COTS/NDI/CAS products during vendor production and routine vendor maintenance. Appropriate constraints and notification requirements of vendor changes shall be incorporated into purchase agreements to enable management of product changes to the maximum extent possible.

I-8
Local Changes

Local changes affecting baselined NAS systems in the in-service management phase of a program shall be evaluated by appropriate IPT's and shall be authorized only by the responsible CCB.

SECTION II: NAS Level Configuration Management Policy

II-1
The NAS Configuration Control Board shall manage NAS technical documentation not identified for control by the Joint Resources Council, baseline Interface Requirements Documents, and approve IPT, regional, and other solution provider CCB Charters and updates. The NAS Configuration Control Board shall also adjudicate and resolve problems regarding NAS system requirements among IPT's or other solution providers.

II-2
The NAS Configuration Control Board shall approve changes to NAS technical documentation, and shall ensure the traceability of requirements from the NAS level to the system and subsystem level. This responsibility begins with the approval of the technical architecture by the Joint Resources Council at the investment decision and continues throughout the life cycle of the program.

II-3
The central configuration management authority shall be responsible for coordinating the development and establishment of corporate configuration management policy. This role shall include monitoring, oversight, evaluation, and enforcement of corporate CM policy. A cross-functional team comprised of FAA senior managers shall serve as a forum for addressing and resolving issues, and for implementing solutions to issues that affect configuration management in the FAA. This cross-functional team shall advise the central configuration management authority and shall assist in the implementation of configuration management policy.

II-4
The central configuration management authority shall maintain a mechanism for assigning FAA type numbers, specification numbers, and Interface Requirements Document and Interface Control Document identifiers, which shall be used to identify systems, interface documentation, and system documentation.

II-5
The central configuration management authority shall publish NAS-MD-001 on a periodic basis using data available from the CM information management system. All Configuration Control Boards shall follow the direction given by the central CM authority regarding the type, content, and availability of information in the information management system to ensure validity of data to be included in the report.

SECTION III: Acquisition-Level Configuration Management Policy

III-1
IPT leaders and those charged with providing solutions to approved NAS and IPT-level requirements shall be responsible for:

- implementation of configuration management plans and processes;

- complete documentation of configuration management transition plans and activities for field organizations; and

- life-cycle management of products/solutions assigned to their Configuration Control Board.

The inclusion of configuration management principles in all acquisition contracts for NAS equipment is critical to this role.

III-2
IPT Configuration Control Boards shall approve or disapprove proposed changes to configuration items under their purview for the life cycle of the configuration item. Unless otherwise approved by the NAS Configuration Control Board, operational and acquisition managers shall co-chair IPT CCBs.

III-3
Configuration Control Boards must analyze changes completely and must coordinate changes that impact other configuration items within the IPT. Proposed changes shall be referred to the NAS CCB if they exceed the approval authority of the IPT CCB or other solution provider CCB.

III-4
In accordance with their Charter and Operating Procedures, IPT, Regional, and NAS Configuration Control Boards must have the authority to approve and the ability to implement changes. Funding shall be available and allocated to a change proposal in order for it to be approved.

III-5
IPT's and other solution providers shall establish baselines for all systems that are operational or that are scheduled for operation in the NAS. The baseline process begins with establishment of the system/subsystem functional baseline and concludes with the establishment and maintenance of the product baseline. Establishing and documenting site configurations and creating baseline documentation for FAA facilities shall be included in this responsibility.

SECTION IV: Regional Configuration Management Policy

IV-1
Regional Configuration Control Boards (RCCB) shall be responsible for controlling changes to site-specific regional transition plans and drawings, facility as-built equipment layout drawings, critical power panel designations, and regional unique equipment, as identified in the approved RCCB Charter.

IV-2
Regional configuration management personnel shall validate the baselined facility space and power panel documentation for accuracy. The regional configuration management plan shall identify the baselined facilities subject to verification and audit and will include the audit interval.

IV-3
The regional configuration management plan shall document the regional configuration management program, including the methodology and processes used to accomplish regional CM tasks.

SECTION V: Operational Configuration Management Policy

V-1
Approved changes to operational NAS configurations shall be incorporated by all field activities as soon as possible, but not later than 6 months from the release of the modification and availability of parts. The NAS Operational Support Program and the AF Modification Tracking Programs shall receive notice of the incorporation of the modification within 10 working days of the installation of the modification or change. Site configuration records shall be updated and the central configuration management authority shall be notified of the action item closure. If approved changes require additional time to incorporate beyond the timeframe specified above, the configuration control decision that documents approval of the change shall specify the estimated time for incorporation or implementation.

V-2
Proposed changes and modifications to NAS operational configurations must be evaluated and processed in accordance with the approved CCB Charter and Operating Procedures and coordinated with or implemented by the NAS Operational Support Program. After being processed through the appropriate management and organizational levels, the designated IPT/AOS prescreening organization shall review proposed changes in accordance with the IPT Configuration Control Board Charter and Operating Procedures.

V-3
Changes and modifications may be made to operational NAS configurations to correct safety or emergency operational conditions, after approval by the designated official in accordance with Airway Facilities and Air Traffic policy. Documentation of all emergency modifications shall contain either a proposed change description/case file or be followed-up with a case file placed in the change control process within 5 working days. This documentation shall be forwarded to the appropriate IPT Configuration Control Board in accordance with the IPT's CCB Charter and Operating Procedures

V-4
Acquisition organizations and IPT's shall provide the NAS Operational Support Organization with detailed documentation describing the operational baseline at the time of commissioning. This documentation consists of the contractually agreed to as-built lists, updated to reflect the configuration at the time of commissioning, and the serialization/revision/version status of all hardware, software, and firmware. This documentation is in addition to the functional, allocated, and product configuration documentation maintained by the IPT. IPT's and other solution providers must also ensure that sites and field offices receive the contractually provided manuals. Documentation describing the operational baseline must be maintained as long as the system is operational in the NAS.